

SAMOLYK, Andrzej, mgr inż.

Technical supporting industry for metal surface machining in the
motorization industry. Techn motor 14 no.7:223-226 J1 '64.

SAMOLETOV, A.

Samoletov, A., Uspenskiy, A., and Y ezdakov, D. "A model poultry packing plant" (The Tomilino plant), Myas. industriya, 1949, No. 1, p. 47-50.

SO: U-3042, 11 March 53, (Letopis'nykh Statey, No. 10, 1949).

1. SAMOILETOV, A. I. and KHOKHLOV, F. F.
2. USSR (600)
4. Yeast
7. Using feed yeast (hydrolized-wood) in poultry raising. Pittsevodstvo no. 3, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

KALASHNIKOV, Ya. I.; KRYLOV, V. S.; MAKOGON, L. A.; SAMOLETOV, A. I.; NIKULITSKIY, I. V.

The introduction of an intensive poultry breeding system. Mias.
ind. SSSR 26 no. 3:26-29 '55. (MIRA 8:9)

1. Zamestitel' ministra promyshlennosti myasnykh i molochnykh
produktov RSFSR (for Kalashnikov). 2. Tekhnoruk Kuntsevskoy
ptitsefabriki (for Krylov). 3. Tekhnoruk Glebovskoy ptitse-
fabriki (for Makogon). 4. Tekhnoruk Tomilinskoy ptitsefabriki
(for Samoletov). 5. Direktor Brattsevskoy ptitsefabriki (for
Nikulitskiy)

(Poultry industry)

USSR/ Agriculture - Aviculture

Card 1/1 Pub. 86 - 6/35

Authors : Samoletov, A. I.

Title : Intensive fowl raising

Periodical : Priroda 44/2, 46 - 53, Feb 1955

Abstract : A description is given of the Tomilin chicken farm and hatchery. The farm uses the most advanced methods as shown by production figures. Illustrations.

Institution :

Submitted :

SAMOLETOV, A.I.; BAKLANOV, N.A.

At the Tomilinsk Poultry Plant. Ptitsevodstvo 8 no. 7:19-23 JI '58.
(MIRA 11:8)

1. Glavnyy zootekhnik Tomilinskoy ptitsfabriki, Moskovskoy oblasti
(for Samoletov). 2. Glavnyy mekhanik Tomilinskoy ptitsefabriki,
Moskovskoy oblasti (for Baklanov).
(Moscow Province--Poultry plants)

SAMOILETOV, A.I., tekhnoruk; KOSTIN, I.G.; SALGANNIK, M.G.

Effect of radioactivity on the incubation process of chicken
eggs. Ptitsvodstvo 8 no.11:23-26 N '58. (MIRA 11:11)

1. Tomilinskaya ptitsefabrika. 2. Nachal'nik radiobiologicheskoy
laboratorii Tomilinskoy ptitsefabriki (for Kostin). 3. Nachal'nik
tsekha inkubatsii Tomilinskoy ptitsefabriki (for Salgannik).
(Incubation) (Radioactivity--Physiological effect)

SAMOILETOV, A.; KARAYAYEV, A.

Seven-year plan of the largest poultry plant. Mias.ind.SSSR
30 no.6:23-25 '59. (MIRA 13:4)

1. Tomilinskaya ptitsefabrika.
(Tomilino--Poultry plants)

ARSENHVI, A.Yu.; BOGDANOV, M.N.; GORIZONTOVA, Ye.A.; YERSHOVA, Ye.I.;
YELENBAUM, N.I.; IOFE, N.Sh.; KARAVAYEV, A.M.; KOLOBOV, G.M.;
LOBIN, N.V., kand. sel'khoz. nauk; KUSHNER, Kh.F., doktor biolog.
nauk; MISHIN, P.N.; PATRIK, I.A., kand. sel'khoz. nauk; REDIKH,
V.K., kand. sel'khoz. nauk; SEMTNEV, S.I., akademik; SAMOLETOV,
A.I.; FILASOV, V.V.; SHKUDOVA, R.I.; SOKOLOVA, G.S., red.;
ROMANOVICH, Ye.F., red.; LEVINA, L.G., tekhn. red.

[Chickens for meat] TSypliata na miaso. Moskva, Izd-vo M-va
sel'khoz. RSFSR, 1960. 197 p. (MIRA 15:1)
(Poultry)

DOBRYNINA, A.Ya.; ZUBAREVA, L.A.; KOSTIN, I.G.; KUSHNER, Kh.F.; SAMOLETOV,
A.I.; SALGANNIK, M.G.

Effect of the irradiation of embryos on postembryonic growth,
development, and productivity in hens. Trudy Inst. gen. no.28:
359-370 '61. (MIRA 14:11)
(POULTRY) (GAMMA RAYS—PHYSIOLOGICAL EFFECT)

KUSHNER, Kh. F; KOSTIN, L. G.; DOBRYNINA, A. Ya;
ZUBAREVA, L. A.; SALGANIK, M. G.; SAMOLETOV, A. I.

"The Use of Small Doses of Gamma-Radiation for the
Improvement of Some Commercial Qualities of Hens"

Report Submitted for the Twelfth World's Poultry
Congress Sydney, Australia 10-18 Aug 1962

DOBRYNINA, A.Ya.; KOSTIN, I.G.; ZUBAREVA, L.A.; SAMOLETOV, A.I.;
SALGANNIK, M.G.

Effect of microdoses of ionizing radiations on the ontogenesis of
farm fowl. Zhivotnovodstvo 22 no.7:61-65 '60. (MIRA 16:5)

1. Institut genetiki AN SSSR i Tomilinskaya ptitsefabrika.
(Poultry) (Radiation—Physiological effect)

DOBRYNINA, A.Ya.; KOSTIN, I.G.; ZUBAREVA, L.A.; Primali uchastiye:
SAMOLETOV, A.I.; SALGANIK, M.G.

Results of irradiating hen's eggs using small doses of gamma
rays. Trudy Inst. gen. no.29:332-344 '62. (MIRA 16:7)

1. Tekhnicheskiy rukovoditel' Tomilinskoy ptitsefabriki (for
Samoletov). 2. Zaveduyushchiy tsekhom inkubatsii Tomilinskoy
ptitsefabriki (for Salganik).
(Eggs) (Gamma rays—Physiological effect)

ULITSKIY, I.I., kand.tekhn.nauk; RIVKIN, S.A., kand.tekhn.nauk; ~~SAMOLETOV,~~
~~M.V., inzh.; DYKHOVICHNIY, A.A., inzh.; KORSAK, Yu., red.;~~
MATUSEVICH, S., tekhn.red.; PATSALYUK, P., tekhn.red.

[Reinforced concrete construction elements; analysis and design]
Zhelezobetonnye konstruktii; raschet i konstruirovaniye. Kiev,
Gos. izd-vo tekhn. lit-ry USSR, 1958. 875 p. (MIRA 12:2)
(Precast concrete construction)

KOZLOV, V.Sh., inzh.; SAMOLETOV, M.V., inzh.; KHARITONOV, I.G., inzh.;
KORSHUNOV, D.A., kand. tekhn. nauk

Standardization of open gantry cranes. Prom. stroi. 42 no.6:
20-23 '65. (MIRA 18:12)

1. Kiyevskiy gosudarstvennyy proyektnyy institut po obshchestroi-
tel'nomu i sanitarno-tekhnicheskomu projektirovaniyy promyshlennykh
predpriyatiy Gosstroya SSSR (for all except Korshunov). 2. Nauchno-
issledovatel'skiy institut stroitel'nykh konstruktsiy Gosstroya SSSR
(for Korshunov).

SAMOLETOVA, L.K.

Improve the quality of leather goods and accessories.
Kozh.-obuv. prom. 7 no.4:21-24 Ap '65.

(MIRA 18:6)

SUBBOTIN, S.A.; SAMOLETOVA, V.V.; ZNAMENSKAYA, A.K.

Properties of synthetic isoprene rubber, a new synthetic rubber.
Khim.prom.no.7:405-407 O-N '56. (MIRA 10:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo
kauchuka.

(Rubber, Synthetic) (Isoprene)

SAMOLETOVA, V. V., KOROTKOV, A. A.

"Polymerization of butadiene with complex catalysts," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Rubber Research Inst.

B-3,084,395

SAMOLETOVA, V. V. SUBBOTIN, S. A., and SNAMENSKAYA, A. K.

"Properties of the new SKI rubber," a paper presented at the 9th Congress
on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow,
Rubber Research Inst.

B-3,084,395

VOTINOV, M.P.; SUBBOTIN, S.A.; SAMOLETOVA, V.V.; KOPYTOVSKAYA, S.P.; KUVSHINSKIY, Ye.V.

Investigating the crystallizability of "SKI" vulcanized rubber by the method of adiabatic stretching. *Vysokom.sped.* 1 no.7:1016-1020 J1 '59.
(MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

(Rubber, Synthetic)

SOV/138-59-2-3/24

AUTHORS: Marey, A. I., Rokityanskiy, I. V. and Samoletova, V.V.

TITLE: Influence of the Polymerization Temperature of Butadiene with Alkali Metals on the Structure and Frost Resistance of Polymers (Vliyaniye temperatury polimerizatsii butadiyena shchelochnymi metallami na stroyeniye i morozostoykost' polimerov)

PERIODICAL: Kauchuk i rezina, 1959, Nr 2, pp 9-12 (USSR)

ABSTRACT: Butadiene polymers have an irregular micro- and macro-structure. This is also characteristic for polybutadiene and polymers obtained during polymerization in the presence of alkali metals and their organic compounds. The authors carried out experiments on the relation between conditions of alkali polymerization, the structure and the properties of the polymers, and investigated the dependence of the glass temperature of butadiene polymers on the content of vinyl groups whilst changing the polymerization temperature from 0 to 120°C in the presence of alkali metals (lithium, sodium and potassium). Data on the structural analysis of polymers by ozonization were published by A. I. Yakubchik et al. Card 1/4 (Ref 6). The content of butadiene chains with vinyl

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Influence of the Polymerization Temperature of Butadiene with Alkali Metals on the Structure and Frost Resistance of Polymers

groups in the polymer was defined according to the quantity of formic acid and formaldehyde in the ozonolysis products. Data in Table 1 indicate that an increase in the polymerization temperature in the given limits causes a substantial linear decrease in the content of vinyl groups in the polymers. This is particularly marked when butadiene is polymerized in the presence of lithium, and is observed to a much lesser degree when potassium is used. The difference in the reaction rates of the addition of butadiene molecules in the 1.2 and 1.4 position at a given temperature is defined by the various values of activation energies of these processes, and formulae are given for calculating the reaction rates and the activation energies. Fig 1: the dependence of the logarithm of the ratio of concentration of the 1.4 and 1.2 bonds on the polymerization temperature. It was found that the glass temperature of the butadiene polymer is a linear function of the concentration of vinyl groups. Glass temperatures for a number of

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Influence of the Polymerization Temperature of Butadiene with Alkali Metals on the Structure and Frost Resistance of Polymers

butadiene polymers containing a varying number of vinyl groups are given in Table 2. Formulae for calculating the concentration of butadiene chains in the polymer (S_v) are given, and it was found that the maximum concentration S_m equals 2, when S_v equals 1, which corresponds to polymers in which all the monomer molecules are added in the 1,2 position. The linear dependence between the glass temperature of the polymer T_g and the concentration of the vinyl groups (S_m) in the polymer chain is shown in a graph (Fig 2) and it is suggested that the content of vinyl groups can be defined according to the glass temperature. This was confirmed by B. A. Dolgoplosk et al. (Ref 12). Polymers obtained at a temperature of 80°C and above are not completely soluble which confirms a spatial or branched structure at sufficiently high plasticity. The separated pure insoluble part of the polymer had the same glass temperature as the soluble fraction. Therefore,

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Alkali Metals on the Structure and Frost Resistance of Polymers

the glass temperature of the butadiene polymers is only
defined by the content of vinyl groups and does not
depend on their branched structure.

There are 2 figures, 2 tables and 12 references, 8 of
which are Soviet and 4 English.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scien-
tific Research Institute for Synthetic Rubber imeni S.V. Lebedev)

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A051/A029

15-9200 also 2209

AUTHORS: Reykh, V.N.; Samoletova, V.V.; Iyanova, L.S.; Feringer, D.P.;
Kormer, V.A.

TITLE: The Properties of CWM-3 (SKI-3), a New Synthetic Isoprene Rubber

PERIODICAL: Kauchuk i Rezina, 1960, No. 3, pp. 1 - 5

TEXT: The author states that in the last decade synthetic rubber of high elasticity was produced both by the USSR and the USA. A list of some of the types which were synthesized is submitted (Refs. 1 - 7). It is pointed out that all isoprene rubbers correspond to some degree to natural rubber, depending on the nature of the catalyst and the polymerization method. SKI-3 was synthesized in the USSR in 1957 - 1958. SKI-3 obtained with a complex modified catalysts was shown not to differ significantly in its microstructure from natural rubber and SN Ameripol. It is quite similar to these in its technological and physico-mechanical properties. The structure of the rubber was determined by the infrared spectroscopy method. A detailed description of the structure is given and Table 1 shows the data of its comparison with natural rubber and Ameripol SN. Its physico-mechanical properties are discussed. It was found that the SKI-3

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The Properties of CRN-3 (SKI-3), a New Synthetic Isoprene Rubber

rubber at a given composition vulcanizes at about the same rate as natural rubber and in this way differs from the quickly-vulcanizing lithium-isoprene rubber. The elevated rate of vulcanization in the former is probably explained by the presence of residual catalyst. SKI-3 is close to natural rubber in its temperature resistance (at 100°C). It was also found that rubbers produced with complex catalysts have a more uniform structure, better technological properties and a higher temperature resistance, but their elastic dynamic properties are inferior to the high-molecular lithium-isoprene rubber. The authors think that SKI-3 due to its many valuable properties is of great significance to the tire and rubber industries. There are 4 tables, 1 figure and 9 references: 4 Soviet and 5 English. X

ASSOCIATION: Vsesoyuznyy institut sinteticheskogo kauchuka im. S.V. Lebedeva
(All-Union Institute for Synthetic Rubber imeni S.V. Lebedev)

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LIVSHITS, I.A.; REYKH, V.N.; RYAZANTSEV, K.P.; SALNIS, K.Yu.; SAMOLETOVA,
V.V.; STEPANOVA, V.I.; SHLIFER, D.I.; Prinimila uchastiye
IVANOVA, L.S.

Properties of ethylene - propylene copolymers. Kauch. i rez.
19 no. 11:1-5 N '60. (MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo
kauchuka im. S.V. Lebedeva.
(Ethylene) (Propene) (Rubber, Synthetic)

REYKH, V.N.; SALNIS, K. Yu.; SAMOLETOVA, V.V.; IVANOVA, L.S.; MIKHAYLOVA, S.A.

Vulcanization of ethylene and propylene copolymers. Kauch.i rez. 20
no.6:1-5 Je '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo
kauchuka im. S. V. Lebedeva.
(Ethylene) (Propene)
(Vulcanization)

MOTOVILOV, N.M.; SANOLOTOVA, V.V.

Stereospecific polymerization of butadiene in polar media. 2.
I rez. 24 no.4:35-38 - Ap '65.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskogo
svyazani im S.V. Lebedeva.

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A051/A029

AUTHORS: Reykh, V.N., Samoletova, V.V., Baranova, G.P., Ivanova, L.S.
TITLE: Properties of Divinyl Rubbers With a Regular Structure and That of Their Vulcanizates
PERIODICAL: Kauchuk i Rezina, 1960, No. 10, pp. 6-12

TEXT: In 1956, in the USSR the following polymer was synthesized using complex catalysts: cis-1,4-divinyl rubber, having a structure of: cis-1,4-links 70%, trans-1,4-links 25% and 1,2-links 2-5% (Ref. 12) and the following properties: vitrification temperature of the polymer -102°C, molecular weight 350000, unsaturation 94-100%. Later on divinyl polymers containing cis-1,4-links up to 95% were produced. In 1958 the possibility of obtaining regularly-constructed divinyl rubbers using lithium as catalyst was proven. The 1,4-link content in this polymer was as high as 85%, the vitrification temperature fluctuated within the range of -100 to -105°C. In the present article the authors deal with the properties of cis-1,4-divinyl rubber obtained by the polymerization of a 99% divinyl rubber using complex catalysts, and also with the properties of lithium-divinyl rubber. The properties of the regularly-constructed divinyl rubbers are compared to that of the industrial types of

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Properties of Divinyl Rubbers With a Regular Structure and That of Their Vulcanizates

natural and divinyl rubber. The polymers synthesized with complex catalysts (СКД-SKD) were found to have a more regular structure than those of the lithium-divinyl type (СКЛД-SKLD). Table 2 gives an indication of these structures and the respective vitrification temperatures. An outstanding feature of the investigated divinyl rubbers is their high resistance to oxidation destruction. The introduction of 1% phenyl- β -naphthalamine insures a satisfactory stability of this rubber in its processing and storage. Rubbers of various molecular weight were obtained when using complex catalysts depending on the conditions of polymerization and, accordingly, different plasticity (the plasticity varied from 0.10 to 0.70). The lithium-divinyl rubber under the given conditions of polymerization was obtained with a high molecular weight only (plasticity 0.05-0.10). The SKD-rubber can be satisfactorily processed on laboratory equipment. During the rolling process it acquires a dense coating and is comparatively easily mixed with the ingredients. The SKLD-rubber crumbles in the rolling process and without preliminary mastication cannot be applied to the production of rubber mixtures. The mastication of divinyl rubbers can be accomplished using chemical plasticizers. In the case of the

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SKLD-rubber the best plasticizer among those being tested proved to be an oxidation-reduction system, consisting of "galipot" (boiled pine resin ГОСТ 840-41.-GOST 840-41) and iron naphthanate. The indicated system (at moderate temperature (130°C) and in a relatively short period of time, viz., 20-30 min) was able to raise the plasticity of the rubber from 0.05-0.10 to 0.50-0.70. It is further pointed out that the investigated rubbers, SKD and SKLD, have no adhesive properties. The technological properties of filled divinyl rubbers were found to be unsatisfactory. The introduction of channel carbon black caused the plasticity to drop, which is explained by the fact that divinyl rubbers do not destructuralize during the mechanical processing, contrary to natural or isoprene rubbers. The type of carbon black used was also found to have an effect on the mixture. Mixtures containing Filbreck "O" carbon black have a much better surface in calendering and atomizing than those filled with gaseous carbon black. Large quantities of softener or plasticizer are suggested to improve the technological properties of filled divinyl rubber mixtures. The vulcanizate properties of divinyl rubbers were studied by comparing them to that of the industrial type divinyl rubbers: CN5 (SKB), CNB (SKV-potassium-divinyl

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Properties of Divinyl Rubbers With a Regular Structure and That of Their Vulcanizates

rubber) and CK5M (SKBM-lithium-divinyl rubber) having the same plasticity as well as with natural rubber and divinyl-styrene rubber, CKC-30A (SKS-30A). Carbon black-filled vulcanizates were chosen for the investigation with respect to the industrial type divinyl rubbers and SKLD. The tear-resistance of the non-filled more regularly constructed SKD polymers (cis-1,4-links 92-95%) was found to be higher and equal to 80 kg/cm². Table 4 presents the comparative figures of the physico-mechanical properties of the carbon black vulcanizates of the divinyl rubbers and that of natural rubber. It can be seen that the indicated divinyl rubbers are close to natural rubber in their elastic-dynamic properties and are superior in their wear-, frost-, and heat-resistance. The residual elongation of the divinyl rubbers decreases with an increase of the cis-1,4-link content, which is assumed to be connected with the relaxation phenomena. The temperature stability of all divinyl rubbers including that of SKD is lower than that of natural rubber. The figures are actually misleading since the testing of the divinyl rubber as compared to natural rubber is conducted at higher temperatures, if the zero point is taken at the vitrification temperature. The highest frost-resistance was found to be in SKD and

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SKLD rubbers, which corresponds to their lower vitrification temperature. At a temperature of 20°C the elasticity of the SKD rubber is much higher than that of the natural rubber with the same carbon black content in the mixture. The SKD and SKLD rubbers have a higher elasticity than the SKS-30A. Since the elasticity of SKD, SKLD and natural rubber at elevated temperatures is almost the same, the heat formation and mechanical losses of the vulcanizates of these rubbers are close. The vulcanizates of the SKD and SKLD rubbers retain their elastic and resistance properties well after heat aging (Table 6), which is a great advantage of the divinyl rubber as compared to the natural rubber. One of the greatest advantages of the regularly-constructed divinyl rubbers is their high wear-resistance, which, in turn, is higher in SKD than in SKLD. Finally, the SKD rubber has a high resistance to crack growth, determined according to the method of H.E. Railsbeck. Concluding, the author emphasizes again all the valuable properties of the regularly-constructed divinyl polymers, stating that these properties of the cis-divinyl rubber make it applicable as a rubber for general use by itself or in a mixture with natural rubber primarily for the tire industry or for frost-resistant articles. The authors

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Properties of Divinyl Rubbers With a Regular Structure and That of Their Vulcanizates

think that this rubber has a great future due to the presence of a large raw material base of the initial monomer (divinyl) and its comparatively low price. There are 6 tables, 4 graphs and 12 references: 1 Soviet, 10 English, 1 German.

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Properties of Divinyl Rubbers With a Regular Structure and That of Their
Vulcanizates

Table 2

The Structure of Divinyl Rubbers

Type of rubber	Catalyst	link content, %				Vitrification temp. °C
		1,4	cis-1,4	trans-1,4	1,2	
SKD	Complex	92-96	80-95	1-12	4-8	-105 - 110
SKLD	Lithium	85	40	45	15	-100 - 105

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Properties of Divinyl Rubbers With a Regular Structure and That of Their Vulcanizates

Table 6

Heat-resistance of divinyl rubber vulcanizates and natural rubber (aging period 96 hrs. at 100°C)						
Indices	Type of rubber					
	SKD		SKLD		Natural rubber	
	before aging	after aging	before aging	after aging	before aging	after aging
Tear-resistance kg/cm ²	236	137	185	130	320	54
recoil elasticity at 20°, at 100°	50-55	53-59	50	50	--	--
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Properties of Divinyl Rubbers With a Regular Structure and That of Their Vulcanizates

Table 4

Physico-mechanical properties of carbon black vulcanizates of divinyl rubbers and natural rubber (temperature of vulcanization 143°0)

Properties	type of rubber						
	SKD	SKLD	SKBM	SKV	SKB	SKS-30A	NR
Plasticity of the rubber	0,50	0,50-0,60	0,50	0,50	0,50	0,50	--
Modulus at 300% elongation, kg/cm ²	60-75	60-75	60-75	60-75	60-75	70	75
Tear resistance kg/cm ²	220-270	150-190	150-170	150-170	150	280	320
Relative elongat. %	500-700	500-190	600	600	600	650	640
Residual elongation, %	10-15	10-20	20-30	20-30	30-50	25	40

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A051/A029

AUTHORS: Livshits, I. A., Reykh, V. N., Ryazantsev, K. P., Salnis, K. Yu., Samoletova, V. V., Stepanova, V. I., Shlifer, D. I.

TITLE: The Properties of Copolymers of Ethylene and Propylene

PERIODICAL: Kauchuk i rezina, 1960, No. 11, pp. 1-5

TEXT: The authors list data on the properties of CK3П (SKEP), one of the ethylene and propylene copolymers synthesized at the VNIISK. It is pointed out that research in the field of polymerization of ethylene hydrocarbons at the VNIISK was begun in 1956. It is stated that the indicated copolymers can be produced within a wide range of molecular weights. The hardness of the polymers, according to Defoe, is 1,400-5,000 g, characteristic elasticity of their solution is from 2.5 (and lower) to 9.0. The vitrification point of the SKEP copolymer is within the range of -50 to 70°C depending on the ratio of the ethylene and propylene. The SKEP copolymers are a dense white hard mass, comparatively easy to process on the rollers. Destruction occurs when they are processed mechanically on the rollers. The greatest destruction is observed in polymers with a high

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The Properties of Copolymers of Ethylene and Propylene

molecular weight (Table 1). Mixtures based on SKEP copolymer were prepared on laboratory rollers at a temperature of 50-60°C. It was found that SKEP copolymers are easily mixed with comparatively large quantities of fillers. Mixtures without softeners are dry, brittle, their surface resembling shagreen leather. During vulcanization they easily form a monolithic mass with a smooth, shiny surface. Vulcanization is carried out at 150-160°C. SKEP copolymer-based mixtures are characterized by a large vulcanization plateau (Fig. 1). The vulcanizates of non-filled mixtures based on the ethylene and propylene copolymer have a low tear-resistance. When a filler is added, especially gaseous channel carbon black and active furnace carbon black of the XAΦ (KhAF) type, the tear-resistance increases significantly. Vulcanizates containing one of the indicated carbon blacks in a quantity of 50 weight parts hardly differ in this index from similar vulcanizates based on natural rubber (Fig. 2). The physico-mechanical properties of carbon black vulcanizates based on SKEP copolymers depend on the molecular weight of the latter. A detailed study of the physico-mechanical properties of the SKEP copolymers was conducted for a mixture containing 45 weight parts of HkAF carbon black. Comparisons were made

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The Properties of Copolymers of Ethylene and Propylene

between these properties and those of the C-23 (S-23) rubber, CAC -30A (SKS-30A) and natural rubber. Gaseous channel carbon black was used as the filler for natural and SKS-30A rubber, which causes optimum stability properties in the indicated rubbers. Vulcanizates of carbon black mixtures based on SKEP copolymer were found to be almost equal to the vulcanizates of similar mixtures based on natural rubber and SKS-30A in their tear-resistance and relative expansion. Higher moduli are obtained at 300% expansion in SKEP vulcanizates by the application of a high standard carbon black (KhAF) instead of channel carbon black. The values of the vulcanizate moduli of the SKEP mixtures may be increased or decreased by using various methods of vulcanization. The SKEP vulcanizate mixture have lower residual elongations than the natural rubber and SKS-30A vulcanizates. They also have a higher elasticity to recoiling at ordinary and high temperatures, which is explained by the comparatively low content of side groups in the polymer chains. When elevating the testing temperature to 100°C, the tear-resistance dropped in the SKEP vulcanizates to a greater degree than in the natural rubber vulcanizates, although it remained sufficiently

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A051/A029

The Properties of Copolymers of Ethylene and Propylene

high. In this index the experimental SKEP copolymers greatly surpass SKS-30A rubber. Due to the almost complete absence of double bonds in the SKEP copolymer, rubbers based on the latter have a very high aging resistance at 100°C and at 150°C and are better in this respect than natural rubber. SKEP polymers are characterized by low hysteretic losses. In this respect they are almost equal to natural rubber and surpass SKS-30A rubbers significantly. Other valuable properties of the SKEP vulcanizates were found to be their high resistance to crack expansion in repeated bending deformations and a high wear-resistance. The latter surpass the natural rubbers greatly in their tear-resistance and come close to the regularly constructed divinyl rubbers (Ref. 5). Since different types of carbon blacks were used as fillers for SKEP, natural and SKS-30A rubbers, it was assumed that the high wear-resistance of the SKEP vulcanizates was connected with the use of the KhAF carbon black, which renders a higher wear-resistance. Additional experimental testing revealed that the type of carbon black has little effect on the wear-resistance of the vulcanizates of carbon black mixtures in the case of vulcanizates based on natural and SKS-30A rubber

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S/138/60/000/011/001/010
A051/A029

The Properties of Copolymers of Ethylene and Propylene

(Table 4). In conclusion the authors point out that the ethylene and propylene (SETP) copolymers have a series of valuable physico-mechanical properties and are of great industrial interest. There are 4 tables, 2 graphs, 5 references: 1 Soviet, 3 English, 1 German.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber im. S.V. Lebedev)

Card 5/5

SAMOLEVSKIY, G.K.

NORNEVSKIY, B.I., kand. tekhn. nauk; BAYKO, V.F., kand. tekhn. nauk;
SAMOLEVSKIY, G.K., kand. tekhn. nauk; KUROPATKIN, P.V., inzh.

Selecting circuit parameters for automatic control windings of diesel
electric propulsion equipment. Sudostroenie 22 [1.e.23] no.10:28-31
0 '57. (MIRA 11:2)

(Marine diesel engines) (Ship propulsion, Electric)

SAMOLEVSKIY, I.Ya.; ZHEMELA, G.P.; KEL'BIYEV, N.Sh.

Preceding crops and the quality of grain. Zemledelie 27 no.9:21-25
S '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy
svekly (for Samolevskiy, Zhemela). 2. Dagestanskiy nauchno-
issledovatel'skiy institut sel'skogo khozyaystva (for Kel'biyev).

SAMOLEVSKIY, I. Ya.

Dissertation: -- "Quality of New Varieties of Milling and Baking Wheat, and Problems of Selecting the Experimental Selection Stations of the VNIS (All Union Sci Res Inst of Sugar). " Cand Agr Sci, All-Union Sci Res Inst of Sugar, Department of Selection of Grain Crops. Kiev 1953

W-30298

SO: Referativnyy Zhurnal, No. 5, Dec 1953, Moscow, AN USSR (~~NOV 1953~~)

SAMOLEVSKIY, Iosif Yakovlevich

[Wheat in the Ukraine and its quality] Pshenytsi Ukrain's'koi
RSR ta ikh iakosti. Kyiv, Derzh.vyd-vo sil'akohospodarskoi
lit-ry URSR, 1959. 182 p.

(MIRA 13:6)

(Ukraine--Wheat)

SAMOLIKOV, K.

"Vacuum testing set."

So. Radio, Vol. 1, p. 45, 1952

SAMOLILOV, B.N.

RT-1446 (The use of "5-2" and "5-4" glues in experiments at low temperatures) Pri-
menenie kleev BF-2 i BF-4 v opytakh prinizkikh temperaturakh.

SO: Zhurnal Tekhnicheskoi Fiziki, 22(5): 888-889, 1952.

SAMOILINA, N.L.

Nonspecific reaction of the body to the administration of the polysaccharide zymosan. Probl. gemat.i perel. krovi 6 no.1:23-30
'61. (MIRA 14:2)

(POLYSACCHARIDES)
(RETICULO-ENDOTHELIAL SYSTEM)

(PROPERDIN)
(HEMOPOIETIC SYSTEM)

JANCIC, Miodrag D.; PETROVIC, Gedomir B.; DESPIC, Aleksandar R.; SAMCLOV,
Dragan D.

A method for obtaining spherical metal powder particles. Glas
Hem dr 29 no.9/10:419-428 '63.

1. Faculty of Technology of the University of Belgrade, Belgrade,
an. Institute of Chemical, Technological and Metallurgical Research,
Belgrade. Submitted January 25, 1964.

SAMOIOV, I.V., inzhener.

Accelerated annealing of cemented parts made from steel 18 KhNVA. Vest.mash.
33 no.7:42-43 J1 '53. (MIRA 6:8)

(Steel--Heat treatment)

SAMOLOV, I.V., inzhener.

Conversion tables for hardness numbers of Brinell and Rockwell
instruments must be made more precise. Standartizatsiia no.5:
68-70 S-O'54. (MLPA 8:2)
(Hardness)

SAMOLOV, I.V.

SAMOLOV, I.V.

A universal attachment to x-ray apparatuses for visual radiosopic examination of specimens. Zav.lav.21 no.8:993-995 '55.

(MLRA 8:11)

(X rays--Industrial applications)

SAMOLOV, I. V.

AUTHOR: Samolov, I. V., Engineer. 129 - 8 - 13/16

TITLE: On the substitution of the primary heat treatment of case hardened steels. (Ob otmene pervichnoy termicheskoy obrabotki tsementuyemykh staley).

PERIODICAL: "Metallovedeniye i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.8, pp.46-50 (U.S.S.R.)

ABSTRACT: The results are described of investigating the influence of preliminary heat treatment on the mechanical properties of the most widely used case hardening steels. Specimens of the steel 12XH3A containing 0.12% C, 0.44% Mn, 0.23% Si, 0.69% Cr and 2.92% Ni were investigated. Half of the specimens were subjected to normalising annealing at 880 C for one hour and cooled in air, whilst the second half of the specimens were not subjected to normalisation annealing. Following that, all the specimens were case hardened at 900 C for ten hours and then cooled in air and then subsequently hardened from 800 C into oil and subjected to low temperature tempering. The resulting mechanical properties are summarised in Table 1 and it can be seen that the real magnitude of the mechanical properties in the heat treated state remains the same; no appreciable differences were observed in the microstructure of the core or of the

Card 1/2

SAMOLOV, I.V.

32-9-39/43

AUTHOR: Samolov, I.V.

TITLE: Report Concerning the Central Laboratory of a Machine Building Plant (V tsentral'noy laboratorii mashinostroitel'nogo zavoda)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol.23, Nr 9, pp.1138-1139 (USSR)

ABSTRACT: A survey is given of progress made in the laboratory. A transportable device of the Brinell type was developed for the measuring of the strength of large parts. A method of thread-rolling on an ordinary threading die tapper was developed. The machines for the testing of heat resistance were re-built and a new method for the simultaneous testing of 2 or 3 samples was introduced. The investigation of the influence exercised by technological factors upon the strength of pipelines (made of 1Kh18N9T steel) was carried out and it was found that such pipelines as were soldered with brass had a fatigue limit that was by 30% higher than that of those welded with atomic hydrogen. Vacuum metallography was introduced, which makes it possible to investigate processes of structural transformation in metals and alloys within temperature ranges of up to 1000°. A universal device to be used with an X-ray apparatus for a visual radiosopic method of parts was constructed and put into operation. A new method for the restoration of Wheatstone

Card 1/2

Report Concerning the Central Laboratory of a Machine Building Plant

32-9-39/43

elements was developed. For controlling parts in the magnetic defectoscope water suspension is used with success. This method is not expensive and easily applied. Semiautomatic devices for the hardening of gear wheels and valves were constructed and put into operation. In order to improve the quality of argon-arc-welding of parts made of refractory sheet iron, the taring of tungsten electrodes was introduced. Consumption of the latter was reduced by 20%.

AVAILABLE: Library of Congress

Card 2/2

TURSKIY, Yu.I.; MAZOV, A.V.; SAMOLOVA, L.Ye.

Colorimetric determination of the tar content of waste
waters from gas producing plants. Gaz.prom. 4 no.10:20-22
0 '59. (MIRA 13:2)
(Coal tar) (Sewage--Analysis)

SAMOLOVA, L. Ye.

5 (2)
ARTICLES:

Mashukov, A. Ye., Lazarev, N. M.,
Gerasim, Yu. M., Zhukovskiy, A. P.,
Ishchen, L. P., Turukly, Yu. L., Masov, A. V., Samolova, L. Ye.

807/32-25-8-13/44

TITLE:
None in Brief

PERIODICAL:

Zhurnal Khimicheskoy Fiziki, 1959, Vol. 25, No. 5, pp 934 - 935
(USSR)

ABSTRACT:

A. Ye. Mashukov reports that the Institute prepared test samples containing several rare elements. For the preparation they used a copper-silica ore (0.0005% In, 0.0075% Zr, 0.00125% Ga, and 0.0005% Ge) and molten lead dust (0.004% In, 0.0125% Zr, 0.0005% Ga, and 0.0005% Ge). The composition of the test samples was determined by three institutes. N. M. Lazarev (Laboratory of Spectrometry) recommends a nephelometric method for the determination of zinc in the alloy MA-2 by a reaction with potassium ferrocyanide using a photocolimator PM-3. The N. M. Lazarev also describes a method for the non-cutting analysis of low alloy steels 15K, 12Kh, 12Kh2 for the determination of the contents of manganese, chromium, titanium, and vanadium. The analysis can be made without preparation of a sample by photocolimetry directly on the surface of the sample in-

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7
investigated. N. M. Lazarev and L. P. Ishchen describe a rapid method for the determination of the relation tin : lead in casting at the test of electroplating units. In electroplated coating is made on a weighed steel 15K1 of (1000) steel. The coating is detached and after separation of the tin as methanamide acid, the lead is titrated with triiodide. N. M. Turukly, A. V. Masov, L. Ye. Samolova developed a colorimetric method for determination of the resin contents of waste solvents in gas plants, which is based on the extraction of the resin with chloroform from the alkaline liquid (to form water-soluble substances). The chloroform extract is subjected to colorimetry on a colorimeter PM-3.

ABSTRACT:

Vsesoyuznyy nauchno-issledovatel'skiy gosmetallurgicheskiy institut (Vsesoyuznyy metallurgii) (All-Union Scientific Metallurgical Research Institute of Non-Ferrous Metals). Vsesoyuznyy nauchno-issledovatel'skiy gosmetallurgicheskiy institut (Vsesoyuznyy metallurgii) (All-Union Scientific Metallurgical Research Institute of Non-Ferrous Metals). Vsesoyuznyy nauchno-issledovatel'skiy gosmetallurgicheskiy institut (Vsesoyuznyy metallurgii) (All-Union Scientific Metallurgical Research Institute of Non-Ferrous Metals). Vsesoyuznyy nauchno-issledovatel'skiy gosmetallurgicheskiy institut (Vsesoyuznyy metallurgii) (All-Union Scientific Metallurgical Research Institute of Non-Ferrous Metals).

Card 2/2

SAMOLOV, F.V.

SAMOLOV, F.V.

Scientific and technical conference on the problems of the use
of synthetic resins in paint and varnish manufacture. Khim.nauka i
prom. 2 no.5:644 '57. (MIRA 10:12)
(Paint--Congresses)
(Gums and resins)

3AMOLOVOVA, V. G.

1
3-Dimethylaminoacetal M. N. Shchukina, N. V. Savitskaya, I. V. Gortinskaya, Yu. S. Tsala, and V. G. Samolova. U.S.S.R. 105,471. May 25, 1967. The compd. is obtained by reduction of ethylene cyanohydrin and methylation of the resulting 3-aminoacetal. The reduction of ethylene cyanohydrin is carried out in a ammoniacal soln. and the methylation is done with CH_3O in HCO_2H .
 M. Hersh

6
 1-4E2d
 1-4E4f

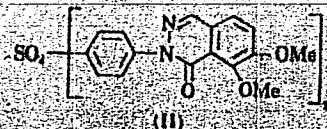
11
 172

GORTINSKAYA, T.V.; SAVITSKAYA, N.V.; SAMOLOVOVA, V.G.; TSIZIN, Yu.S.;
SHCHUKINA, M.N.

Obtaining dimethylaminopropanol from ethylene cyanohydrin. Med.
prom, 11 no.4:23-25 Ap.'57. (MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(PROPANOL) (HYDRACRYLONITRILE)

Some derivatives of 4,4'-dihydrazinobiphenyl sulfone and 4-hydrazinophenyl 2-acetamido-5-thiazolyl sulfone. T. V. Gortinskaya, V. G. Samoilovskaya, and M. N. Shchukina (S. G. G. Zhur. Obshch. Khim. 27, 1000-4 (1957).—Heat- ing 1.4 g. optically active in 50 ml. EtOH with 1 g. (p-HCl.H₂NHC₆H₄SO₂) in 10 ml. H₂O gave a ppt. of 2.2 g. [4-(2,3,4-HO₃C(MeO)₂C₆H₄CH:NNH)C₆H₄SO₂] (I), m. 208-9°. If the reaction is run in H₂O there is formed yellow II, m. 208-9°, which changes to I on heating with ROH or alc. H₂SO₄. Hydrogenation of 4-nitrophenyl-2-amino-5-thiazolyl



sulfone in EtOH over Raney Ni gave 87% 4-H₂NC₆H₄ analog, m. 217-18°. Hydrogenation of 4-nitrophenyl-2-acetamido-5-thiazolyl sulfone over Raney Ni in H₂O gave the 4-H₂NC₆H₄ analog, m. 208-9°. This (5.4 g.), 42 ml. AcOH, 21 ml. concd. HCl, and 10.5 ml. H₂O diazotized with 1.1 g. NaNO₂ at 0° and the solu. treated with 7.85 g. SnCl₂ in 38.5 ml. HCl, and kept 2 days at room temp. gave 0.3 g. p-H₂NNH-C₆H₄I, analog HCl salt, m. 222°; the filtrate treated with H₂S and filtered gave with NH₄OH 1.0 g. free base (IIA), m. 24-5°. The following hydrazones are reported: from

Gorinskaya, T.V.; Samolukova, V.G.; Shebukina, M.N.

(p -H₂NNHC₆H₄)₂SO₂ (III) and p -HOC₆H₄CHO, m. 238-40°; from III and p -AcNHC₆H₄CHO, m. 262-5°; from III and 3,4-MeO(HO)C₆H₃CHO, m. 260-2°; from 4-hydrazinophenyl-2-acetamido-5-thiazolyl sulfone (IV) and p -AcNHC₆H₄CHO, m. 221-3°; from IV and 3,4-MeO(HO)C₆H₃CHO, m. 238-40°; from IV and opianic acid, m. 263-4°. III showed some *in vitro* activity against human and avian tuberculosis and acid-fast saprophytic sp., *Microsporum* sp., *Trypophyton* sp., *Actinomyces* sp., and *actinomyces* sp. Some activity was found for III hydrazone, p -HOC₆H₄CHO, and G. M. Kosolapov I.

PM

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SAMOLOVOVA, V.G.; YERMOIAYEVA, V.G.; GORTINSKAYA, T.V.; YASHUNSKIY, V.G.;
SHCHUKINA, M.N.

Synthesis of asterol and other derivatives of aminotoxibenzthiazoles.
Med. prom. 13 no.5:23-26 My '59. (MIRA 12:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(THIAZOLE)

SAMOLOVOVA, V.G.; GORTINSKAYA, T.V.; SHCHUKINA, M.N.

Phenoxazine. Part 1: Synthesis of some 10-substituted derivatives
of phenoxazine. Zhur.ob.khim. 30 no.5:1516-1517 My '60.
(MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(Phenoxazine)

SAMOLOVOVA, V.G.; GORTINSKAYA, T.V.; SHCHUKINA, M.N.

Phenoxazone series. Part 6: Synthesis of some 10-substituted
derivatives of phenoxazine. Zhur.ob.khim. 32 no.4:1085-1088
Ap '62. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(Phenoxazine)

SAMOLOVOVA, V.G.; GORTINSKAYA, T.V.; SHCHUKINA, M.N.

Phenoxazine. Part 7: Some 10-substituted phenoxazines. Zhur.
ob. khim. 34 no.11:3791-3794 N '64 (MIRA 18:1)

SAMOLOVOVA, V.G.; GORTINSKAYA, T.V.; SHCHUKINA, M.N.

Phenoxazine series. Part 3: Glycide derivatives of phenoxazine.
Zhur.ob.khim. 31 no.5:1492-1497 My '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(Glycidol) (Phenoxazine)

SAMOLYAK, Ye.M., inzh.; OVCHAR, Z.L., inzh.

Instrument used for rapid analysis of a propane-butane mixture
in the air. Sudostroenie 24 no. 6:61-62 Je '58. (MIRA 11:8)
(Gas detectors)

ALFEROV, Zh.I. [Alf'orov, Zh.I.]; ZIMOGOROVA, N.S. [Zymohorova, N.S.];
SAMOL'YANOV, A.M. [Samol'ianov, O.M.]; TRUKAN, M.K.

Photoelectric properties of heterojunctions in some semiconductors.
Ukr. fiz. zhur. 9 no.6:659-663 Je '64. (MIRA 17:11)

1. Fiziko-tekhnicheskiy institut im. A.F. Ioffe AN SSSR, Leningrad.

Samol'yanov, V.M.

SAMOL'YANOV, V.M., inzh.-polkovnik

Some ballistic peculiarities of finless rockets. Artill. zhur.
no.1:30-36 Ja '58. (MIRA 11:2)
(Rockets (Ordnance))

SAMOLYK, A., mgr inx.

Tropicalization of plated protective and decorative
coatings on automobiles. Techn motor 12 no. 1: 19-26
Ja '62.

SAMOLYK, ANDRZEJ

Poland /Chemical Technology. Chemical Products
and Their Application

I-14

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31776

Author : Samolyk Andrzej, Kepinski Jerzy

Title : Sewage Water of Electroplating Shops

Orig Pub: Gaz, woda, techn. sanit., 1956, 30, No 6, 213-215

Abstract: By using a preliminary washing of the articles in a special bath it is possible to reduce considerably expenditures of the reagents utilized while decreasing at the same time the degree of contamination of sewage water. Consideration is given to the possibility of recovering metals from the spent baths, conditions of mixing sewage water. Formulas are given for calculating the

Card 1/2

Poland /Chemical Technology. Chemical Products
and Their Application

I-14

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31776

concentration of electrolytes in individual wash-
ing baths and the concentration of sewage water
in streams.

Card 2/2

SAMOLYK, Andrzej, mgr inz.

Utilization properties of technical chromium coatings on
automobile engine parts. Techn motor 14 no.8:244-247 Ag '64

SAMOLYK, Andrzej, mgr inz.

Modern methods of testing protective and decorative electroplated
coatings in the motorization industry. Techn motor 14 no.9:276-282
S '64

SAMOLYUBOV, L.A. [deceased]

Observations of Arend-Roland's comet. Uch. zap. Smol. gos.
ped. inst. No.10:103-104 '62.

Astronomical observation posts in schools. Ibid.:105-110
(MIRA 17:1)

GERCHIKOV, Ye.Ya., inzh.; SAMOLYUBOVER, E.L., inzh.

Development of telegraph exchanges in the Ukraine. Vest.
sviazi 22 no.1:21-22 Ja '62. (MIRA 14:12)
(Ukraine---Telegraph)

SAMONENKO, S.V.

Using the method of orthogonal polynomials in the solution of
some problems of analysis and synthesis of multistage amplifiers.
Radiotekh. i elektron. 1 no.5:623-626 My '56. (MLRA 9:12)

(Functions, Orthogonal) (Amplifiers, Electron-tube)

SAMONINA, G.Ye.

Effect of a necrotized tissue on the conduction of excitation in the vagus nerve. Nauch.dokl.vys.shkoly; biol.nauki no.2169-71 '63. (MIRA 16:4)

1. Rekomendovana kafedroy fiziologii zhivotnykh Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(VAGUS NERVE) (ELECTROCARDIOGRAPHY)

SAMONINA, G.Ye. (Moskva)

Localization and interrelationship of centers controlling the cardiovascular system. Usp. sovr. biol. 57 no.3:404-421 My-Je '64.
(MIRA 17:6)

SAMONINA, G.Ye.; UDEL'NOV, M.G.

Quantitative correlations between the afferent activity and
efferent impulse in viscerocardiac reflexes. Biul.eksp.biol.
i med. 58 no.7:12-15 J1 '64. (MIRA 18:2)

1. Kafedra fiziologii zhivotnykh i cheloveka (zav. - deystvitel'-
nyy chlen AMN SSSR prof. A.V.Lebed'skiy) Moskovskogo gosudarstven-
nogo universiteta imeni Lomonosova. Submitted June 7, 1963.

ACC NR: AR6033757

SOURCE CODE: UR/0081/66/000/018/P012/P013

AUTHOR: Perfilova, V. P.; Gryazev, N. N.; Dmitriyeva, K. A.; Samonina, N. A.; Ozerskaya, L. Ye.

TITLE: Removal of sulfur compounds from jet fuels by a sorption

SOURCE: Ref. zh. Khimiya, Part II, Abs. 18P90

REF SOURCE: Sb. Issled. protsessov adsorbts. i katalitich. ochildki nefteproduktov v prisutstvii porist. tel. No. 1. Saratov, Saratovsk. un-t, 1965, 35-38

TOPIC TAGS: jet fuel, sulfur compound removal, adsorption, silica gel, organic sulfur compound, FUEL CONTAMINATION

ABSTRACT: A study has been made of the removal of sulfur compounds from TS-1 jet fuels with silica gel. The experiments were conducted on adsorption columns filled with 0.25—0.50 mm particles of ASM silica gel activated at about 200C. The fuels were fed in the column at a rate of 1 vol fuel/1 vol adsorbent per hour. The thermal stability of the fuels was evaluated by oxidation in a LSART-59 apparatus. The group composition of sulfur compounds was determined potentiometrically by the method of I. A. Rubinshtein and Z. A. Kleymenova (Metody analiza org. soyedineniy nefti, ikh smesey i proizvodnykh [Analytical methods for determining organosulfur compounds, their mixtures, and derivatives in petroleum]. M., Uzd. AN SSSR). This method makes it possible to determine mercaptan and bisulfide sulfur with an accuracy of up to

Cord 1/2

SAMON'KIN, M.A., inzh.; IVASHKEVICH, V.P., inzh.

Dies for manufacturing parts with a single press blow. Mashinostroenie
no.3:38-40 My-Je '62. (MIRA 15:7)

1. Avtozavod "Kommunar" Zaporozhskogo sovnarkhoza.
(Dies (Metalworking))

SAMONIKIN, M.A.; IVASHKEVICH, V.P.

Automatic turret die. Mashinostroenie no.5:43-44 S-0 '63.
(MIRA 16:12)

SAMONIKIN, M.A., inzh.; IVASHKEVICH, V.P., inzh.

Semiautomatic die for multilateral cutouts in sectional materials.
Mashinostroenie no.4:52-53 31-Ag '65.

(MIRA 28:8)

SAMONOV, A.; 'PORSIN, V.

Task of vital importance. Pozh.delo 7 no.11:12 N '61.

(MIRA 14:11)

(Chemical industries--Fires and fire prevention)

SAMONOV, A.M.; SKOROV, D.M.

Carbon distribution in ZH1, Lal-T and EL-211 stainless steels.
Met. i metalloved. chist. met. no. 2;229-237 '60. (MIRA 13:12)
(Steel, Stainless--Metallography)

SAMONOV, A.M.; SKOROV, D.M.

Studying the distribution of sulfur and phosphorus in ZHl,
Ial-T and El-211 steels, by means of autoradiography. Met.
i metalloed. chist. met. no. 2:238-251 '60. (MIRA 13:12)
(Steel, Stainless--Metallography)

S/137/62/000/007/012/072
A052/A101

AUTHORS: Yemel'yanov, V. S., Yevstyukhin, A. I., Barinov, I. P., Samonov, A.M.

TITLE: Separation of zirconium and hafnium chlorides

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 27, abstract 7G187
(In collection: "Metallurgiya i metalloved. chist. metallov".
Moscow, Gosatomizdat, no. 3, 1961, 17 - 27)

TEXT: A method of separating Zr and Hf in the vaporous phase is described. The method is based on the reduction of $ZrCl_4$ and $HfCl_4$ by means of zirconium or aluminum to lower chlorides and on the disproportioning of low chlorides on heating. At the reduction by means of Zr the maximum reduction for $ZrCl_4$ was observed at $400^\circ C$ and made up $\sim 92\%$. The best results of the disproportioning of trichlorides were achieved at $500^\circ C$ and 3-hour exposure. To reach the highest coefficient of separation, the reduction process by means of Al should be carried out in the low temperature region ($330 - 350^\circ C$). There are 8 references.

G. Svodtseva

[Abstracter's note: Complete translation]

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S/828/62/000/000/004/017
E039/E420

AUTHORS: Yemel'yanov, V.S., Yevstyukhin, A.I., Barinov, I.P.,
Samonov, A.M.

TITLE: The separation of zirconium and hafnium by the
selective reduction of their tetrachlorides by
zirconium and aluminium

SOURCE: Razdeleniye blizkikh po svoystvam redkikh metallov.
Mezhvuz. konfer. po metodam razdel. blizkikh po svoyst.
red. metallov. Moscow, Metallurgizdat, 1962, 51-62

TEXT: Although Zr and Hf are separated on a commercial scale the
present methods used are so cumbersome and difficult that the cost
of the metals is high. This work is aimed at investigating a new
and possibly more efficient method of separation. It is shown
that the separation process involving the selective reduction of
the tetrachlorides of Zr and Hf by Zr and Al is entirely feasible
under laboratory conditions. Using powdered Zr as a reducing
agent the maximum reduction of $ZrCl_4$ is observed at $400^{\circ}C$ and
attains nearly 92% while for $HfCl_4$ maximum reduction occurs at
 $390^{\circ}C$ and reaches 17%. When using powdered Al better
separation is attained at a lower temperature than in the case of
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The separation of zirconium ...

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reduction by Zr. In the latter case the content of hafnium chloride in $ZrCl_3$ has a minimum value equal to 0.029% for a reduction temperature of 330°C. For the best conditions of reduction by Zr (at 400°C) the minimum quantities of hafnium chloride in $ZrCl_3$ are 0.108 and 0.13%. The quantity of $ZrCl_4$ reduced by Al at 330°C is, however, only 21% while for Zr at 400°C it is 91.7%. Reducing with Al at 400°C gives an 89% reduction and a hafnium chloride concentration in the $ZrCl_3$ of 0.091%. The data obtained confirms that this process can be performed on a large scale. There are 4 figures and 2 tables.

Card 2/2

S/755/61/000/003/002/027

AUTHORS: Yemel'yanov, V.S., Yevstyukhin, A.I., Barinov, I.P., Samonov, A.M.

TITLE: The separation of zirconium and hafnium chlorides.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Metallurgiya i metallove-
deniye chistykh metallov. no.3. 1961, 17-26.

TEXT: The paper deals with the need for Hf-free Zr for nuclear-powerplant applications. The two elements were separated by selective reduction of their tetrachlorides by Zr and Al. Optimal separation procedures for lab use and the prerequisites for large-scale processing are set forth. One prime reason for the usefulness of Zr, namely, its small capture cross-section relative to thermal neutrons, is nullified by the presence of Hf with its 103-157 barn capture cross-section. The proposed method consists in the reduction of the Zr and Hf tetrachlorides into lower(tri- and di-) chlorides and their disproportionation (D) by heating. Three reactions are involved: (1) In the presence of an n-valent metallic or metalloid reducer M, $n\text{Zr(Hf)Cl}_4 + \text{M} \rightarrow n\text{Zr(Hf)Cl}_3 + \text{MCl}_n$, wherein the reduction of ZrCl_4 proceeds more readily than that of HfCl_4 ; (2) upon heating, D occurs as $2\text{Zr(Hf)Cl}_3 \rightarrow \text{Zr(Hf)Cl}_2 + \text{Zr(Hf)Cl}_{(\text{gas})4}$; and (3) both dichlorides are subject to D when heated as $2\text{Zr(Hf)Cl}_2 \rightleftharpoons \text{Zr(Hf)Cl}_4 + \text{Zr(Hf)}$, where the lower chlorides of Zr

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The separation of zirconium and hafnium chlorides. S/755/61/000/003/002/027

are more stable than those of Hf. The differences in reducibility and D of the Zr and Hf provide the basis for the separation process. Three successive operations must thus be performed to obtain $ZrCl_4$ with a small content of $HfCl_4$ and, ultimately, metallic Zr with a small Hf content. The preparation of the chlorides by a chlorination by CCl_4 of ZrO_2 and HfO_2 in a 100:1 ratio is described. The lab equipment has been previously described in the sbornik "Metallurgiya i metallove-deniya chistyky metallov," no.1, Izd-vo MIFI, 1959. The initial separation procedure in a 10^{-4} -torr vacuum, with the tetrachloride vapors passing over Zr shavings heated to $430^{\circ}C$, was found to be ineffective. In a second attempt, some 10-11 g intensely degassed Zr powder and a like amount of $ZrCl_4$ and $HfCl_4$ were held for 8 hrs at $400^{\circ}C$ in a quartz ampule 30 mm diam and 100 mm long; upon completion of reduction and removal of the nonreduced chlorides, D of the trichlorides was performed in 3 hrs at 550° in the same ampules. The tetrachloride formed was continuously removed. The method reduced the $HfCl_4$ content from 4-5% in the non-reduced tetrachlorides to 0.2-0.3% in the $ZrCl_4$ after D of the trichlorides. The need for a rapid and more sensitive radiometric method prompted development of a method based on the use of radioactive Hf^{181} , which is described in detail. Optimal temperature and time relationships for the D were determined experimentally (third-step dichloride D in 16 hrs at $650^{\circ}C$). Experiments with Al as a metallic

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S/755/61/000/003/0027027

reducer met with trouble in the dichloride-D stage, because an Al-and-AlCl₃ fusion formed in which ZrCl₂ and HfCl₂ dissolved. The radiometric method of Hf-concentration determination is detailed. Upon completion of the optimal procedure, the ZrCl₄ contained only 0.029% HfCl₄; the final amount of ZrCl₄ constituted about 20% of the initial ZrCl₄ which contained 1% HfCl₄. The resulting metallic Zr was suitable for nuclear-powerplant applications. It is anticipated that an improvement in the reduction technique can result in a substantial improvement in the Zr-Hf separation ratio. One obvious improvement is the enlargement of the contact area between the tetrachloride with the Zr powder (the initially formed brown surface crust in the present procedure appears to inhibit such diffusion). A new lab equipment based on this consideration has been designed and built (cross-section shown). A quartz chamber contained a tree with tiered Zr trays, each covered with a thin layer of Zr or other reducer metal. Other suitable tray materials are Ni, stainless steel, etc. There are 4 figures, 2 tables, and 8 references (2 German and 6 English-language).

ASSOCIATION: MIFI (Moscow Engineering Physics Institute).

Card 3/3

KREYTER, Vladimir Mikhaylovich, prof.; SAMONOV, I.Z., red.

[Prospecting for mineral deposits] Poiski i razvedka
mestorozhdenii poleznykh iskopayemykh. Moskva, Nedra,
1964. 398 p. (MIRA 17:10)

1. Kafedra mestorozhdeniy poleznykh iskopayemykh i ikh
razvedki Universiteta druzhby narodov imeni Patrisa
Lumumby, Moskva (for Kreyter).

SAMSONOV, I.Z.

Effect of pre-formation tectonics on the morphology of ore veins
in the Belukha deposit. Izv. vys. uchev. zav.; geol. i razv. no.3:
69-78 Mr '58. (MIRA 11:10)

1. Moskovskiy institut tsvetnykh metallov i zolota imeni M.I.
Kalinina.

(Baikal region--Ore deposits)

SAMONOV, I.Z.

Characteristics of the mineralization of the Belukha ore deposit
and the distribution of wolframite in vein deposits. Izv. vys.
ucheb. zav.; geol. i razv. 2 no.6:60-75 Je '59 (MIRA 13:3)

1. Krasnoyarskiy institut tsevenykh metallov im. M.I. Kalinina.
(Belukha region (Transbaikalia)--Ore deposits)

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[Basic problems and methods of studying structures of ore provinces
 (Continued on next card)]